

### REMARKS

In the Office Action, the Examiner rejected Claims 1, 9 and 17 under 35 U.S.C. 102 as being fully anticipated by U.S. Patent 6,178,529 (Short, et al.). Also, the Examiner objected to Claims 2-8, 10-16 and 18-29 as not being appropriately identified as either "withdrawn" or "cancelled."

Applicants herein ask that Claims 1, 9 and 17 be amended to better define the subject matters of these claims.

Applicants note that, in this Amendment, Claims 2-8, 10-16 and 18-20 are identified as "withdrawn." In view of this, the Examiner is asked to reconsider and to withdraw the objection to Claims 2-8, 10-16 and 18-20.

In addition, for the reasons advanced below, Claims 1, 9 and 17 patentably distinguish over the prior art and are allowable. The Examiner is thus also asked to enter this Amendment, to reconsider and to withdraw the rejection of Claims 1, 9 and 17, and to allow these claims.

The present invention, generally, relates to decision support systems designed for managing applications and resources using rule-based constraints. Prior art approaches for managing these applications and resources require considerable human involvement, and thus are expensive, error prone, and non-scalable beyond a certain size. A primary reason for this is that these conventional approaches adopt a static resource-centric view where the physical resources in a cluster of resources are considered to be static entities, that are either available or not available and are managed using predetermined strategies.

The present invention addresses this situation by taking an approach that is different from the traditional resource management approach. In the approach of this invention, resources are considered as services whose availability and quality of service depends on the availability and the quality of service provided by one or more other services in the cluster. For this reason, the cluster and its resources may be represented by two dimensions or groups.

The first dimension captures the semi-static nature of each resource, such as the type and quality of the supporting services needed to enable its services. The second dimension is the dynamic state of the various services provided by the cluster. The dynamic changes are captured by events. By separating the dynamic part (the events) from the semi-static part (the rules), and combining these in a systematic manner only when needed, the desired level of automation in the coordination and mapping of resources and services can be achieved.

The prior art does not disclose or suggest this two-dimensional representation of the resources, and the use of that representation in the above-discussed manner.

In particular, Short, et al. discloses a method and system to facilitate the control and monitoring of disparate resources. In this method, a resource component is connected to a resource object for management thereof, and a resource monitor connects the resource component to a cluster service. The resource component includes a plurality of methods that are common to the resource components, and these methods are called by the resource monitor to control and monitor operation of the resource object through the resource component.

Thus, Short, et al. is directed to controlling and monitoring resources, while the instant invention is directed to configuring resources. It is noted that in column 4, lines 36 and 37, Short, et al. mentions a system administrator that configures any devices that are to be managed. This refers, though, to configuring individual devices; not to configuring a cluster of resources so

as to find an optimal configuration given a set of constraints and policies.

Each of Claims 1, 9 and 17 describes important features not shown in or suggested by Short, et al. In particular, each of these claims describes the feature that the constraints and policies, which are used to identify the optimal resource configuration, are separated into two groups, a semi-static group and a dynamic group, and these groups are combined only when needed to find that optimal configuration.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest this feature of the instant invention.


This feature is of utility because it helps to achieve a high level of automation in the coordination and mapping of resources and services.

In view of the above-discussed differences between Claims 1, 9 and 17, and because of the advantages associated with these differences, these claims patentably distinguish over the prior art and are allowable.

The changes to the claims that are being requested herein only elaborate features already described in the claims. In particular, the claims presently describe resources, and finding an optimal configuration of those resources given a set of policies and constraints, and the amendments requested herein elaborate on the procedure for using those policies and constraints to find that optimal configuration. It is thus believed that entry of this Amendment is within the discretion of the Examiner, and such entry is respectfully requested.

In light of the above discussion, the Examiner is asked to enter this Amendment, to reconsider and to withdraw the rejection of Claims 1, 9 and 17, and to allow these claims. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

  
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